

of Ammonia ; both assays demonstrating clearly the perfect truth of the foregoing details.

#### POSTSCRIPT.

It was correctly remarked, I think by Major Baker, when this paper was read at the meeting of the Society, that water taken at the surface would hold less silt in suspension, as that at the bottom would hold more, than the true mean amount. Agreeing fully in this, I have contrived a plan for obtaining water at any moderate depth, and am collecting another series of specimens to include both the surface and the mean depth water. I have moreover obtained the assistance of Mr. H. Hiller, Commanding the H. C. Outer Floating Light Vessel, and have supplied him with directions so that I trust we shall be able to have this singular problem fully investigated in a year or two.

H. P.

*Notices and Descriptions of various Reptiles, new or little known.—*

*By* EDWARD BLYTH.

(Continued from Vol. XXII. p. 655.)

CALAMARIA CATENATA, nobis, *n. s.* (*C. monticola*? Cantor, *P. Z. S.* 1839, p. 50).\* No anterior frontals: the vertical plate broad, pentagonal, and almost as large as the occipitals: 13 rows of scales: scutæ 187; scutellæ 41 pairs. Predominant colour dusky above, formed by minute black specks upon a pale ground-tint; below pale buff with an iridescent lustre, and marked with lateral series of square black spots chiefly upon alternate scutæ. Four black lines throughout above, the upper bordering a pale medial streak, which is simple upon the tail, but along the body forms a concatenation of elongated oval spots. An imperfect whitish-buff collar, and similar marks before and behind the eye. Length of specimen 17 in., of which tail  $2\frac{1}{2}$  in. From Asám. Mr. Robinson.†

C. RETICULATA, nobis, *n. s.* Vertical plate hexagonal, angulated to the front, and not half so large as the occipitals: supra-orbital

\* "*C. olivaceo fusca, collari, latè flavo, lineâ dorsali albicante, abdomine citrino. Scut. abd. 125; scutel. subcaud. 44. Hab. Naga Hills.*"

† This and other species sent by Mr. Robinson, we much suspect are from the Khásya hills, or other upland territory.

large and subtriangular. Thirteen rows of scales: scutæ 136, 138; scutellæ 27, 28 pairs. Colour shining dull black, brilliant and iridescent below: minute yellowish-white specks on the sides of the mouth, throat, and along the sides of the body. In spirit the edges of the scales are seen to be of a deep black, imparting a reticulated appearance. The larger of two specimens measures 12 in., of which tail  $2\frac{5}{8}$  in. From Asám. Mr. Robinson.

*C. TENUICERS*, nobis, *n. s.* Colour iridescent black above, yellowish-white below. Nearly affined to *C. LONGICERS*, Cantor, but the head anterior to the eyes much less elongated, and the posterior frontals consequently are about as broad as long: vertical plate elongate-hexangular, broadest anteriorly: head conical, narrow; the jaws of equal length. Thirteen rows of scales. Scutæ 138; scutellæ 37 pairs. Length of specimen 14 in., of which tail 2 in. From the vicinity of Darjiling. Capt. W. S. Sherwill.

The two following species of this genus are remarkable for having the posterior frontals united.

*C. FUSCA*, nobis, *n. s.* Of an iridescent dull black colour throughout, the ventrals slightly margined paler. Head small, narrow. Vertical plate pentangular with rounded anterior base, the posterior lateral angles so obtuse in some that the plate might then be described as triangular: occipitals very large, elongated. Thirteen rows of scales. Scutæ 155-7; scutellæ 30-34 pairs. Length 15 in., of which tail 2 in. Young obscurely striated with longitudinal rows of pale dots. From Darjiling. Capt. W. S. Sherwill.

*C. OBSCURO-STRATA*, nobis, *n. s.* Much affined to last: the muzzle less obtusely pointed, and the anterior frontals conspicuously smaller. Iridescent brown-black, the under-parts particularly lustrous; obscurely streaked throughout with a pale band occupying the adjoining portions of the fourth and fifth rows of scales on each side, a narrow pale line also along the middle of each of the first three rows, and three similar narrow pale lines along the back, all alternating with dusky lines. Thirteen rows of scales. Scutæ 153-163; scutellæ 40 pairs. Length of the larger of two specimens  $11\frac{1}{4}$  in., of which tail 2 in. From Rangoon.

The next has both the anterior and the posterior frontals, respectively, united or undivided.

*C. BICOLOR*, nobis, *n. s.* Dusky-plumbeous above, buffy-white below, throughout; these colours gradually blending, and not abruptly demarcated as in *C. TENUICEPS*. Vertical plate pentangular, broader than long, or forming almost a triangle laterally truncated: rostral large and broad; the muzzle consequently obtuse; and the head broader and flatter than usual in this genus. Seventeen rows of scales. Scutæ 210; scutellæ 75 pairs. Length of a specimen  $19\frac{1}{2}$  in., of which tail  $4\frac{3}{8}$  in. From Asám. Mr. Robinson.

*CORONELLA CALLICEPHALUS*, Gray, *Ann. M. N. H.*, Dec. 1853, p. 390.\* A beautiful species, with form and scutation of head as in the European *COLUBER ESCULAPEI* (as figured by Schlegel); but the eye somewhat smaller. Nineteen rows of scales: scutæ 201, 211; scutellæ 56, 65 pairs. Colour a light brown, paler below. Head with a median black line over the vertical and occipital scutæ, and another continued from each eye to the first of a series of about 18 semi-annuli, which in the young consist of large and broad white-edged black spots, reaching down to the abdominal scutæ; but in adults the black of the interior of these spots disappears more or less completely, leaving only the pale-margined black edge, so that two narrow black transverse bands remain in place of the single broad black spot of the young: also at about the ninth or tenth of the latter from the head, two narrow black dorsal lines commence, which at first are broken and irregular, but gradually become continuous and well defined towards and upon the tail, where they cross its transverse bands and are continued to the extreme tip. Length of a specimen 27 in., of which tail 4 in. From Asám. Mr. Robinson.

*XENODON PURPURASCENS*, Schlegel. The varieties of colouring of this Snake are extraordinary; even more so than those of *LYCODON AULICUS*. Two adults in spirit from Goalpara are entirely of a pale colour (evidently, however, much blanched), *without traces of markings*. Another, from Asám, is of a dull red-brown above, with narrow black transverse bands; lower-parts reddish-pearly, with two rows of somewhat indistinct black spots, mostly on alternate scutæ: head-markings indistinct. A third variety (*Coronella albo-cincta*, Cantor, *P. Z. S.* 1839, p. 50), also from Asám, is of a clay colour,

\* When the above description was taken, we had not seen that by Mr. Gray, which is less detailed.

the scales black-margined and sprinkled over with minute black spots, and the entire length marked with about 24 black-edged white semi-annuli; beneath, the black spots are more developed than in the last variety, and are more or less continuous towards the vent: the usual head-markings distinct. Two others, from Goalpara and Lower Asám, nearly resemble the last, but have no white semi-annuli, nor markings underneath the tail or anterior third of body. Others, again, from various parts, including central\* and S. India and Ceylon, also the Tenasserim provinces, have the upper-parts more or less dark, and variously freckled, often with imperfect semi-annuli placed near together, and alternately distinct and comparatively obscure: the under-parts commonly spotless; and sometimes the collar quite black. A single young specimen from Ceylon has 3 rows of black spots continued upon each scuta as far as the vent, where the medial row ceases, and the other two rows are continued to the tip of the tail: above, the black semi-annuli are divided, and the halves placed alternately to the right and left, becoming gradually indistinct upon the hinder half. Upon a first view, this might be considered a distinct species; but we can perceive no structural variation from the rest, and intermediate varieties most probably occur. In all, save the first, the peculiar markings of the head readily indicate the species; as do the rostral and anterior frontal plates from other Indian serpents.

*COLUBER NIGROMARGINATUS*, nobis, *n. s.* Nearly affined to *C. RADIATUS*, Schlegel, but attaining the size of *C. MUCOSUS*, (L., v. *Blumenbachii*, Merrem): our largest specimen measuring  $7\frac{3}{4}$  ft. long, of which the tail is 2 ft. 1 in. Colour a bright pea-green (changing in spirit to blue), paler below, each scale of the upper-parts margined with black. Upon the shields of the crown the black margins are extremely slight though present, and they gradually increase in breadth posteriorly until about the middle of the entire length, when the two colours resolve into four black alternating with three narrower blue streaks which are continued to the end of the tail. Eye larger than in *C. MUCOSUS*, much larger than in *C. RADIATUS*. One large superior and one small inferior præ-ocular plate; and a single frænal, the latter as in *C. RADIATUS*, to which

\* Ammerkántak, towards source of Nerbudda; 3700 ft. elevation.



the present species bears a near approximation in the details of its structure. Sixteen rows of scales, the four median slightly carinated. Scutæ 192-4; scutellæ 126-132 pairs. Hab. Vicinity of Darjiling, where procured by Capt. W. S. Sherwill, who sent with it examples of *C. RADIATUS*, *C. KORROS*, and *C. FASCIOLATUS*. Dr. Kelaart has also favoured us with *C. KORROS* from Ceylon; but the species does not appear to have been hitherto observed in the Indian peninsula.

*C. PRASINUS*, nobis, *n. s.* Wholly green, becoming verditer in spirit; glaucous below and bordering the mouth: 19 rows of slightly carinated scales: scutæ 205, 6; scutellæ 107, 8 pairs. Vertical shield triangular with rounded apex; rather larger than the supra-orbitals, and rather smaller than the occipitals: a single large præ-orbital, and one elongate-oval frænal. Tail suddenly tapering. The larger of two specimens measures 37 in., of which tail 9 in. From Asám. Mr. Robinson.

*C. HEXAGONOTUS* (?), Cantor,\* var., adult. Length 4 ft., of which tail  $15\frac{1}{2}$  in.; the latter remarkably slender. Colour brown, paler below; the anterior fourth of the body marked with transverse dusky bands, which become gradually more obscure till they disappear. Seventeen rows of slightly imbricated scales, the median row hexagonal. Vertical plate large, pentagonal, broad to the front. Two præ-orbitals, the lower small and bordered by the third and fourth labials; the fourth labial bordering the eye, which is of moderate size; two post-orbitals, and a third or infra-orbital bordering on the fourth, fifth, and sixth labials: nasals large, elongate, the nostril opening in the middle, near the outer border of the anterior frontal; a single small subtriangular frænal. Scutæ 195; scutellæ 144 pairs. Hab. Arakan (Ramri)?

*C. DIADEMA*, Schlegel; *C. Oppellii*, Wagler. This is a little known species; and two examples of it in our museum (origin uncertain) would not be readily recognised from Russell's plate (II, 30), which would appear to have been taken from an old and remarkably thick individual. One of the Society's specimens is of about equal length to that figured by Russell, but is much more slender; the other is smaller. The markings of the head are very peculiar, as the transverse black band from eye to eye and continued below the

\* *J. A. S.* XVI, 921.

eye, and the four black specks on the two occipital plates. Upon the nape is a longitudinal black stripe, followed by a series of black spots along the spine, the first few of them being round, the rest gradually assuming the appearance of short transverse bands, much more regular and placed nearer together than as represented by Russell: towards the tail they diminish in size, and upon it are reduced to a series of minute black specks. Their number, from head to base of tail, amounts to 75. Alternating with the dorsal bands is, on each side, a series of smaller lateral transverse bands, which begin on the sides of the neck as large round black spots, following two oblique streaks behind the eye, and disappear altogether on the tail. They are placed with great regularity; and on the borders of the abdominal scutæ is a further series of black spots. Such are the markings of our larger specimen, these being of an unmixed black. In our smaller example, all the dorsal black bands have the middle of each scale marked with the pale clay-colour which constitutes the general ground-tint, the lateral streaks are less decided, but the spots on the borders of the scutæ are more so, and every alternate scuta has an additional spot near each lateral margin. There are 19 rows of perfectly smooth (or not carinated) imbricated scales. Eye rather large: a great upper and small lower præ-orbital; one large subquadrate frænal; two post-orbitals: and the fifth and sixth labials border the eye below. Scutæ 207-8; scutellæ 98 pairs. Length of our larger specimen  $36\frac{1}{2}$  in., of which tail  $9\frac{1}{4}$  in.

*C. PICTUS*, Daudin; *C. Plinii*, Merrem (Russell, I, 29). Of this little known species, Mr. Jerdon has favoured us with a young example, from S. India. It is a true COLUBER, and not a variety of *CORONELLA BALIODEIRA*, Schlegel, as suspected by Dr. Cantor.\*

*HERPETODRYAS HELENA*, (Daudin). In the Society's museum are two specimens of a Snake, from Darjiling and Rungpore respectively, which may represent a variety of this species. Colour nearly uniform brown above, yellowish-white below with two lateral rows of dusky specks, one speck on each side of every abdominal scuta; a slight dusky streak from behind the eye; a trace of a black V-like mark on the nape; and very obscure indications of body-markings

\* *J. A. S.* XVI, 913.

analogous to those of Russell's figure (I, 32). Seventeen rows of carinated scales. The larger of two individuals measures  $29\frac{1}{2}$  in., of which the tail occupies 8 in., and head 1 in. Scutæ 189, 199; scutellæ 84, 90.

*PSAMMOPHIS CONDANARIUS*, Gray (Russell, I, pl. 27; very bad). Seventeen rows of smooth scales, of which the first row on each side is very broad, the second row less broad, and the rest narrow and lanceolate. General colour bright green above, pale yellow or yellowish white below; longitudinally striped, except more or less towards the head, with four pale bands: the upper occupying the fourth and half respectively of the third and fifth rows of scales, and bounded above and below with a more or less defined narrow black line; the lower occupying the lateral margins of the abdominal scutæ and subcaudal scutellæ, and defined above and below with narrow black lines which are very distinct. A pale superciliary streak bordered with black commences from the nostrils, and another below the eye, occupying the upper half of the labials. Some also shew an ill-defined pale dorsal streak. Hab. Lower Bengal?

*LEPTOPHIS RUBESCENS*; *Dipsas rubescens*, Gray, Hardwicke's *Ill. Ind. Zool.* This seems affined to *DENDROPHIS RHODOPLEURON*, Schlegel, from Amboyna. The nareal apertures are remarkably minute and abruptly pierced in the centre of the nasals. Vertical plate narrow. Neck slender. Body much compressed. General aspect of colour reddish-brown, powdered over throughout, excepting on the chin and throat, with minute specks. A row of black spots along the spine. A brown central occipital stripe, and similar lateral stripe from nostril to ear. Seventeen rows of smooth scales. Scutæ 198; scutellæ 120. From Mergui. Capt. Berdmore.

*L. ORNATUS*, (Shaw), var. Marked very like young specimens of *CORONELLA RUSSELLII*, excepting on the head. Colour olive-brown, the upper-parts marked throughout with a regular series of transverse black bars, broader towards the head, narrower and becoming indistinct towards the end of the tail; these black bars set off by whitish edges. Head marked nearly as usual. From Ceylon. Dr. Kelaart.

*DIPSAS FERRUGINEA*, Cantor, *P. Z. S.* 1839, p. 53. Head smooth and flat above, remarkably Frog-like, with somewhat pointed muzzle:

anterior frontals very small; the supra-orbitals larger than the vertical plate. Canines above and below well developed. Tail suddenly tapering. Colour a dull somewhat ferruginous brown above, a little marked with black and white shewing between the scales; a broad dark lateral band throughout, and above it an obscure pale band: lower-parts buffy yellowish-white, with a narrow dark lateral band on each side, and the rest thickly sprinkled over with minute black specks. Head with a narrow black median line over the frontal and vertical plates, and another over the supra-orbital, meeting its opposite on the occipital and continued to the nape: black lines also border the lips and pass through the eye. Seventeen rows of scales: scutæ 171, 175; scutellæ 56, 64 pairs. Length of one  $18\frac{3}{4}$  in., of which tail  $3\frac{1}{4}$  in. From Asám and the vicinity of Darjiling; Mr. Robinson and Capt. Sherwill.

D. MONTICOLA, Cantor, *P. Z. S.* 1839, p. 53. Affined to D. TRIGONOTA in structure. Brown above, pearly-white below, separated by a broad black streak behind the eye: lowermost row of scales black-bordered for the anterior third of the body; and traces of other lines towards the head. Fifteen rows of scales: scutæ 158, 193; scutellæ 82, 106 pairs. Length of one 22 in., of which tail  $7\frac{1}{4}$  in. Hab. Asám; Mr. Robinson.

D. NIGROMARGINATA, nobis, *n. s.* Also affined to D. TRIGONOTA, with median row of dorsal scales broad and hexagonal. No elongated teeth. Colour throughout green above, the distensible skin black between the scales; yellowish-white below. Twenty-one ranges of scales: scutæ 252; scutellæ 132 pairs. Length of one 42 in., of which tail 11 in. Hab. Asám. Mr. Robinson.\*

\* D. TRIGONOTA, the most common species of India proper, attains to about 6 ft. in length, but is rarely met with so large, and preys (at least those of medium size) chiefly on the CALOTES VERSICOLOR in L. Bengal. Vertical shield as broad as in the Malayan D. MULTIMACULATA, not less so as represented in Dr. Schlegel's plate. The markings are ill represented by Russell, who figures the young. The very young (about 9 in.) are of a pale ashy colour, with but slight traces of the markings of the adult; a faint lateral band consisting of three parallel somewhat darker lines is continued throughout the length, also a medial and two lateral abdominal lines, besides which the under-parts are very minutely speckled. There is a white median frontal streak bordered with black, continued into a black occi-



*TROPIDONOTUS ZEBRINUS*, nobis, *n. s.* (TR. CHRYSARGOS, Schlegel, var.?) Vertical plate twice as broad as the superciliary, and of same length. One præ-orbital and three post-orbitals. Upper-parts (in spirit) deep plumbeous, obscurely spotted with black; the sides and under-parts yellowish-white, the former throughout banded with black, and each band having a whitish spot (probably yellow in the recent specimen) above it. Head plumbeous above, the labial plates with a triangular black spot at the point of junction of each of them above, and exhibiting thus two larger spots posterior and two smaller anterior to the eye. Two or three distinct black bands across the nape. Rows of scales 15: scutæ 137; scutellæ 96 pairs. Length of specimen (which is quite young)  $10\frac{3}{8}$  in., of which the tail measures  $8\frac{1}{2}$  in. From Mergui. Capt. Berdmore.

TR. ANGUSTICEPS, nobis, *n. s.* Head narrow, not broader than the neck, little depressed, the eye much larger than in TR. UMBRATUS, and vertical shield broad. Colour (in spirit) plumbeous above, uniformly spotted with black throughout; below whitish, more or less variegated with black on the hinder half: head without markings; but a V-like mark on the nape with apex towards the occiput, becoming obsolete in adults. One specimen has 4 præ-orbital and 5 post-orbital plates; but in general these number 2 or 3 and 4: and the same specimen is remarkable for having no dark markings above, but some indistinct pale spots, probably of a vivid colour on the recent Snake. In an adult the black spots on the upper parts are almost confined to the skin between the scales, and there is no blackish colour on the hinder half underneath. Seventeen rows of scales: scutæ 167, 72; scutellæ 57, 67 pairs. Length

pital streak. When 2 or 3 ft. long, the white frontal streak is retained, and at the occiput are two diverging white lines, which converge and meet behind at the first of the series of imperfectly triangular white spots bordered and set off with black, which are continued throughout the body; becoming gradually more ill defined towards and upon the tail. The lower-parts are now pearly-white, a trace only of the lateral abdominal lines appearing as a row of small spots on each side, though not regularly upon every scuta. The full grown adult is altogether much darker, with the white markings tending to become obsolete; a conspicuous median black stripe is continued over the forehead and occiput, and another proceeds backward from each eye. Abdomen more or less speckled, with the lines of lateral spots more or less apparent.

of an adult 41 in., of which tail  $8\frac{1}{2}$  in. Inhabits Asám and Arakan.

TR. SUBMINIATUS (?), Schlegel. A most variable species, affined in structure to the preceding. One 16 in. long has the upper-parts speckled over with black and bright yellow on a greenish ground, under-parts whitish throughout. Head plumbeous above: a large black patch behind the occiput, surrounded except in front by orange-yellow border, behind which again the nape is bright vermillion, chiefly between the scales. A conspicuous black streak below the eye, and two black spots posteriorly towards the gape: scutæ 147; scutellæ 94 pairs. Another, rather larger, has the back almost plain dark plumbeous, paler and spotted with black towards the nape; lower-parts freckled with minute black specks, and increasingly so to the tail-tip: occiput and nape green, crossed with two orange bands, becoming redder posteriorly. All the upper labials with a black stripe, where each adjoins the next. Scutæ 157; scutellæ 66 pairs. A third, 29 in. long, has the upper-parts dark olive brown, with bright yellow spots on the skin between the scales; the lower dull pearly: nape green, followed by a vermillion space: a single broad black streak below the eye. Scutæ 155; scutellæ 83 pairs. The above three specimens are from Asám. Numerous others from Rungpore and Arakan, are mostly similar to the last, with generally a double black streak below the eye uniting beneath, rarely a single streak, and one large specimen has no streak below the eye: this would seem to disappear with age. Rows of scales 17, 19: scutæ 150, 166; scutellæ 60 to 90 pairs, but generally intermediate. Tail in all suddenly tapering. Largest specimen, which is much thicker than the others (denoting maturity), 3 ft., of which tail  $8\frac{1}{2}$  in.

TR. MACROPS, nobis, *n. s.* Eye very large; the vertical shield broad, and posterior frontals twice as large as the anterior. Prevailing hue of the upper-parts a dull vinaceous, many of the scales margined with black, and some with yellow: a series of yellow spots (about 50 in number) continued along the spine to the extremity of the tail, with a row of black spots on either side. Head and neck plumbeous, diverging on the nape where the first of the series of yellow spots is placed; a slight whitish V-like mark on occiput.

Lower parts yellowish-white, with specks and powdering of dusky ; more prevalent towards and upon the tail. Seventeen ranges of scales : scutæ 164-6 ; scutellæ 130-46 pairs. Length of largest specimen 31 in., of which tail  $6\frac{1}{4}$  in.

Two specimens closely resemble, but a third presents some differences of colour. The row of yellow spots is wanting along the spine, also the dark band on the nape, and the pale V-like occipital mark : the under-parts also are more uniformly whitish. Scutæ 168 ; scutellæ 124 pairs only. All are from near Darjiling. Capt. W. S. Sherwill.

*TR. DIPSAS*, nobis, *n. s.* Form as in *DIPSAS*, slender, the neck much compressed. Head oval, flattened above ; eyes large ; the muzzle anterior to the orbits short : nostrils small, opening quite laterally ; the nasal and rostral shields being vertical. General colour plumbeous above, obscurely spotted with black, and two barely traceable lines of whitish spots, more distinct towards and upon the neck where they increase in size towards the head. Occiput black, with an elongated white medial spot, and white V-like mark behind it, the apex of which is prolonged a little backward. A narrow black line from eye to eye passing in front towards the muzzle ; and broader black streak posterior to the eye, continued as a series of longish oval spots on the sides of the neck bordering the scutæ. Some black marks also on the upper labials. Under-parts white throughout, with a row of minute black specks on either side. Rows of scales 17 : scutæ 169 ; scutellæ 90 pairs. Specimen (young)  $21\frac{1}{2}$  in. long, of which tail  $4\frac{1}{4}$  in. Vicinity of Darjiling. Capt. W. S. Sherwill.

*TR. PLATYCEPS*, nobis, *n. s.* A beautiful species, with small and flat (but not broad) head, having much the aspect of a *HERPETO-DRYAS*.\* Young specimens generally shew the two white dots on the occipital shields, seen also in *TR. UMBRATUS*. Frontal and nasal shields vertical. Head and upper-parts deep green with slightly black-edged scales ; the lower-parts bright yellow, with a coral-red stripe bordering the abdominal scutæ on each side, and strongly

\* Perhaps *H. FRÆNATUS*, Gray, (*Ann. M. N. H.*, Dec. 1853, p. 390,) may prove to be a variety.

tinging the sides of the body : subcaudal scutellæ variegated with greenish-dusky, and traces of the same about the throat. A white streak bordered with black passes backward from behind the eye and then upward to the occiput, but this would seem to disappear with age. Such is (or was) the colouring of two specimens respectively 27 in. long (of which tail 8 in.), and  $21\frac{1}{2}$  in. (of which tail  $6\frac{1}{8}$  in.). But another,  $21\frac{1}{2}$  in. long, is remarkable for having the chin and throat quite black, also the black markings of the dorsal scales more strongly developed than in the others, and the black marblings of the subcaudal scutellæ are more intense : the lateral coral-red band is merely indicated ; and the white streak behind the eye is more strongly developed and continued forward to the muzzle. Number of rows of scales 19 : scutæ 174, 86 ; scutellæ 89, 99 pairs. Another, from Asám, appears identical, but has 155 scutæ only ; and in spirit appears of a dull olive-green colour, with two longitudinal pale ruddy dorsal stripes, much as in *TR. STOLATUS*, and the lower-parts are marked throughout with a black lateral spot on each scuta, seen also in the black-throated specimen. A small young example from the Khásya hills is similar to that from Asám. The three first described are from near Darjiling. Capt. W. S. Sherwill.

*ELAPS PERSONATUS*, nobis, *n. s.* Vertical plate about equal to the posterior frontals : supra-orbitals large, subquadrangular, elongate. Colour of upper-parts bright red in the adult, brown or reddish-brown in the young ; marked throughout with from 22 to 28 narrow black semi-annuli, having slight whitish margins : under-parts dull yellowish-white, mottled throughout with black patches more or less developed : head black above, with whitish muzzle and broad cross band posterior to the eyes. Scales lustrous ; 13 rows above : scutæ 196, 218 ; scutellæ 29, 34 pairs. Length of largest specimen  $24\frac{1}{4}$  in., of which tail  $2\frac{3}{4}$  in. From Asám.

*RANA ROBUSTA*, nobis, *n. s.* A moderately large Frog from Ceylon. Limbs exceedingly thick and massive ; the third-digits fully webbed. Skin subgranulose, especially on the lower-parts. A slight transverse fold on the breast. Colour dusky above, with a large black patch on the back, another on the croup, and smaller lateral patches. Lower-parts yellowish-white, with a V-like mark



on the lower surface of the thigh in one of two specimens, both males. The same individual has dusky spots or imperfect streaks on the lower surface of the thigh, and its posterior surface is marked with longitudinal streaks of alternating black and yellowish-white. Digital membrane speckled with black. Length from snout to vent 3 in., and of hind-limb 4 in., of which the foot is half. Presented by Dr. E. F. Kelaart.

*LYMNODYTES MACULARIUS*, nobis, *n. s.* Differs from *L. ERYTHRÆUS* by the slightly but distinctly papillose skin of the back, and non-verrucose posterior surface of thighs; by its shorter and stouter limbs, and short anterior digits, the two outermost of which have their terminal disks smaller than in *L. ERYTHRÆUS*. There is a broad black band from nostril to loin, bordered above and below by narrow pale yellow streaks. Entire lower-parts spotless light yellow, as also the upper lip. A black spot at the shoulder, and line along the posterior surface of the fore-limb. One or more similar lines on the hind-limbs; the thighs beautifully mottled with black; and a black medial line along the back, which becomes double over the loins. Length of male from muzzle to vent  $2\frac{3}{8}$  in.; of hind-limb  $3\frac{3}{4}$  in.; of which the foot measures  $1\frac{3}{4}$  in. Hab. Ceylon. Dr. E. F. Kelaart.

*L. LIVIDUS*, nobis, *n. s.* A large species with short and remarkably fleshy thighs. Colour dusky above, paler and tinged with ruddy on the sides which are spotted with black. Chin, throat and breast, minutely variegated pale and dusky. Belly and thighs underneath, sullied whitish. Above, the thighs and shanks are paler than the back and tinged with ruddy, having several dusky cross-bands. Posterior surface of thigh smooth or non-verrucose. Length from muzzle to vent  $3\frac{1}{4}$  in., and of hind-leg  $4\frac{1}{2}$  in., of which the foot is  $2\frac{1}{4}$  in. From Colombo. Dr. E. F. Kelaart.

*MEGALOPHRYS GIGAS*, nobis, *n. s.* (Edible Frog of Sikim, vide *J. A. S.* XXII, 557.) Adult male  $4\frac{1}{2}$  in. from snout to vent; hind-foot  $7\frac{1}{4}$  in., of which foot from heel  $3\frac{3}{8}$  in. Breadth of head 2 in. Interdigital membrane of the hind-foot well developed. Fore-limbs extremely thick, with the skin of their inner surface highly granulose. Upper-parts uniformly dull reddish or purplish black, a little marked with white on the posterior surface

of the thigh: below whitish, much suffused with dusky, and some irregular white spots or marblings along the rami of the lower jaw, and also on the sides of the body and along the sides of the limbs. What appear to be the young have the head proportionally less broad than in the adult, and the upper-parts have more of an olive tinge, and the under-parts are ochreous-yellow, mottled with reddish-brown. Hab. Sikim Himalaya. Capt. W. S. Sherwill.\*

BOMBINATOR SIKIMMENSIS, nobis, *n. s.* Size and general character of the European *B. IGNEUS*, (Laur.), but the hind-toes free or slightly webbed only at their extreme base. Male with four large subquadrilateral papillose callosities on the breast, and corresponding callosities on the upper surface of the innermost digits of each fore-foot. The tubercles of the head, body, and limbs, much more developed in males than in females. On the back are four irregular rows of large porous tubercles, and numerous minute tubercles without pores stud the rest of the upper-parts. On the hind-limbs small porous tubercles are very regularly disposed. Colour dull livid olive-green above, a little banded on the limbs; flame-coloured below, more or less marbled with dusky. Presented by Capt. W. S. Sherwill.

---

In a collection of snakes from North Carolina presented to the Society by the Rev. F. Fitzgerald, through the American Consul, are two fine species of *HOMOLOPSIS*, which do not appear to be described either by Dr. Schlegel, or among the "extra-limitals" of New York by M. Dekay, or in other American lists to which we have access. They may, therefore, be here briefly characterized as probably new and undescribed.

*HOMOLOPSIS CRASSA*, nobis. Form thick and massive, with sub-tetragonal section; the head broad, subtrigonal, flat, much broader than the neck: body covered with 19 rows of broad, smooth and shining imbricated scales, which on the sides are much larger and broader than upon the back; eyes placed very forward: a single anterior frontal, and series of 7 upper and 9 lower labials. Teeth very minute. Colour black above, yellowish-white below; the sides

\* Two other forms affined to *MEGALOPHRYS*, and like it and *BOMBINATOR*, exhibiting no external *tympaña*, also sent from the Sikim Himalaya by Capt. Sherwill, we have at present no means of classifying, for want of books of reference.

transversely banded with about 75 bands in all, the black of the back descending and the yellowish-white of the lower parts ascending alternately, and the former continued irregularly across the lower-parts where the two colours are about equally distributed. Head black, irregularly variegated with yellowish-white; the rostral and labials of the latter hue, and all except the last three inferior labials having a medial black spot. Most of the shields of the chin and throat are also thus spotted. Scutæ 200; scutellæ 37 pairs. Length of specimen 4 ft., of which tail 4 in. Head  $1\frac{3}{8}$  in. in greatest breadth.

H. PARVICEPS, nobis. Form moderately thick, attenuating towards the head, which is small and not broader than the neck; body covered with 19 rows of smooth shining imbricated scales, which on the sides are much broader than upon the back; tail with only 8 rows of hexagonal scales besides the scutellæ. Two anterior frontals, half the size of the posterior. Teeth minute. Colour black above, yellowish-white beneath, the latter extending over  $2\frac{1}{2}$  rows of scales on either side. Three yellowish-white dorsal stripes, one median extending from the occiput to the middle of the tail, the others lateral and occupying part of the 5th and 6th rows of scales. On the lower parts, also, two lines are formed of broad black spots, one on either side of each scuta, and along the middle of the body is a third and median row. The shields of the head are margined and variegated with yellowish-white, and each labial except the posterior three lower are whitish having a large black spot. Scutæ 161; scutellæ 45. Length of specimen  $2\frac{1}{2}$  ft., of which tail  $5\frac{1}{2}$  in.

---

ADDENDA. Since the former part of the foregoing paper was published, the author has had an opportunity of shewing the Society's specimens of Burmese Tortoises to the Rev. J. Mason of Maulmein, who has long devoted considerable attention to the zoology of the Tenasserim provinces. This gentleman immediately recognised the TESTUDO MEGALOPUS (*J. A. S.* XXII, 640,) as the species with which he was most familiar in Burma: at once distinguishing it from the Indian T. STELLATA: and as his judgment is worthy of confidence, we may pretty safely now rank T. MEGALOPUS as a third Burmese species of the genus.

At about the same date of publication, appeared a paper by Dr. Gray on some undescribed species of reptiles collected by Dr. Joseph Hooker in the Khásia mountains and Sikim Himalaya. Among them, his genus *DOPASIA* approximates my *OPHISEPS* (*J. A. S.* XXII, 655), but is evidently distinct; the position of the vent in *DOPASIA* is not stated. *PARIAS MACULATA*, Gray, is identical with *TRIGONOCEPHALUS NILGIRIENSIS*, Jerdon, *J. A. S.* XXII, 524, as we find upon comparison of a fine Asámese specimen with the descriptions by Messrs. Jerdon and Gray, and with a coloured figure sent by Mr. Jerdon. Mr. Gray does not give the number of rows of scales or of abdominal or caudal plates. Mr. Jerdon writes—"23 rows of carinated scales. Scutæ 142; scutellæ 36." The Asámese specimen has 23 rows of the first; scutæ 143; scutellæ about 36 pairs. Length  $14\frac{1}{2}$  in., of which tail barely 2 in. Colour pale, variegated with dark blackish-edged patches on the upper parts, forming irregular transverse bands, more or less divided and the halves alternating; below whitish, the plates speckled laterally with dusky; chin and sides of throat blackish; a whitish band proceeding backward from the eye, another from cleft of mouth, and between them a black space. This Asámese specimen has an elongated black occipital spot, succeeded by two lateral streaks which unite posteriorly; a somewhat different arrangement from that in Mr. Jerdon's drawing, and again different from that exhibited in an example from the vicinity of Darjiling, which also has the under-parts much more mottled with black; but all are evidently identical in species.

---